

**Prepublication Copy of the Standard Tables  
and Technical Notes for  
*Summary Report 1998: Doctorate Recipients  
from United States Universities***

**The Seven Basic Tables, 1998 (Appendix A)  
The Trend Tables, 1988-1998 (Appendix B)  
Technical Notes (Appendix C)**

**Survey of Earned Doctorates**

**November 1999**

**Please reference these data as:**

**NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates,  
Prepublication Tables for the *Summary Report 1998, Doctorate  
Recipients from United States Universities*, November 1999.**

## **PROJECT DESCRIPTION**

The Survey of Earned Doctorates (SED), an annual census of new recipients of research doctorates from U.S. institutions, provides baseline data on the U.S. population of research doctorates. For each respondent, the survey collects demographic information, an educational history, data on financial support during graduate school, and information about postgraduation plans. Government agencies, academic institutions and industry rely on SED data to address policy, education, and human resource issues.

Five federal agencies sponsor the survey: the National Science Foundation, the National Institutes of Health, the National Endowment for the Humanities, the U.S. Department of Education, and the U.S. Department of Agriculture. Until 1997, the National Research Council of the National Academy of Sciences administered the SED for the federal sponsors. Beginning with the 1996-97 academic year, the National Opinion Research Center (NORC) at the University of Chicago assumed responsibility for conducting the survey. In cooperation with graduate deans of the 399 research doctorate-granting institutions, NORC collected SED data for 42,683 doctorate recipients in the 1997-98 academic year (a period hereafter referred to as AY 1998). The percentage of self-reported questionnaires was 91.5 percent.

Each year, data gathered from the SED are added to the Doctorate Records File (DRF), a virtually complete database of doctorate recipients from 1920 to the present. SED questionnaire data supply DRF records from 1958 to the present. Prior to 1958, DRF data were gathered from commencement programs from doctorate-granting institutions. The DRF, which currently holds 1,313,733 records, is regarded as the main source of information on doctoral recipients at the national level. The DRF serves as the sampling frame for the biennial Survey of Doctorate Recipients, a longitudinal survey describing career paths of doctorate recipients in science and engineering.

**\*\*\* IMPORTANT NOTICE \*\*\***

The estimates reported for the Survey of Earned Doctorates (SED) are simple tabulations of all available information with no adjustment for nonresponse. Therefore, differences in response rates from year to year can produce numerical fluctuations that are unrelated to real trends.

Although response to the SED has been as high as 95 to 98 percent over time, it declined to 92 percent during the 1980s. In an effort to improve the response rate, the survey methodology was modified in the years after 1989. Response rose, stabilizing around 95 percent for 1991 to 1995. However, the response rates for 1996 and 1997 were 92.8 percent and 91.5 percent, respectively. This year, the response rate again was 91.5 percent. (Note: These percentages represent *self-report rates*, that is, the proportion of questionnaires completed by doctorate recipients. While survey forms containing partial information filled in by either the doctoral institution or staff of the National Opinion Research Center are not included in these rates, tables in this report incorporate the available data from these forms.) The self-report rate for 1998 may increase slightly in the next year if additional questionnaires are received from doctorate recipients. See Appendix C for a table giving survey response rates from 1967 to 1998.

*Item* response rates have shown a pattern of improvement since 1990—a natural consequence of the increase in the overall self-report rate, as well as a result of format revisions to the questionnaire and follow-ups for missing information. In 1990, new follow-up procedures were implemented to increase coverage of several variables: birth year, sex, race/ethnicity, citizenship status, country of citizenship, baccalaureate year and institution, and postgraduation plans. Response rates for these variables have since improved—especially for citizenship and race/ethnicity, resulting in an increase in the reported numbers of minority Ph.D.s. (However, for 1997 and 1998 the citizenship response rate of 92 percent is lower than it was in 1990-1996.) Whether or not individuals completed the survey questionnaire, the following four data items are available for most all recipients: sex, Ph.D. institution, Ph.D. field, and Ph.D. year.

The data for a given year are updated the following year with any responses received *after* survey closure. Post-survey adjustment was most significant for 1990 and 1991 Ph.D.s, with the largest impact on the number of blacks. For both of these years the total number of black Ph.D.s increased by about 7.5 percent in the year after survey closure. The survey cycle was then extended to allow receipt of more follow-up information before closure, resulting in much smaller post-survey adjustments for 1992, 1993, 1994, and 1995 data (a 1.4 percent increase in black Ph.D.s for 1992, a 0.2 percent increase for 1993, a 0.5 percent increase for 1994, and a 1.5 percent increase for 1995).

Adjustments to data are presented in reports subsequent to the initial report for a survey. For example, updates for 1994 appeared in *Summary Report 1995*. Updates to 1998 data will be presented in next year's report.